

PC-Control / HACCP Network Installation

For Convotherm by Cleveland Combination Oven Steamers

This kit connects a PC to as many as 31 Combis at a maximum distance of 3280 Feet (1000 meters). The software can download cooking programs, record HACCP information, and monitor the networked Combis in real-time. This installation manual includes instructions for both RS232 and USB connections for a PC. Choose the connection that works best for your application and follow the instructions that apply. If any parts are missing from any kits, please contact Cleveland Range Service at 216-481-4900.

⚠ CAUTION

Turn off all power to Combis before installation of PC-HACCP Network.

Follow all Safety and Operating Instructions

Failure to do so can result in injury, and equipment and property damage.

RS232 Correct connection of a PC to Combis using the Communication Module with RS232 Port.



FOR RS232 connection use part number: CPC-HACCP-MU232

Correct connection of a PC to Combis using the Communication Module with USB Port.



FOR USB connection use part number: CPC-HACCP-MUUSB

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 **Cleveland**

⚠ CAUTION

**Read and understand this manual before using this PC-HACCP Kit.
Follow all Safety and Operating Instructions
Failure to do so can result in injury, and equipment and property damage.**

NOTICE: In addition to the kit, the following wire is required for installation between each oven:

- For standard voltage units: 18/2 CPM/CL3P audio wire – e.g.: McMaster-Carr P/N- 71055K76.
- For 480 volt units use 18/2 UL AWM 2501 communication wire – e.g.: Allied Electronics P/N – 708-1301. (Can be used with all voltage ovens.)

PC-HACCP KIT CONTENTS

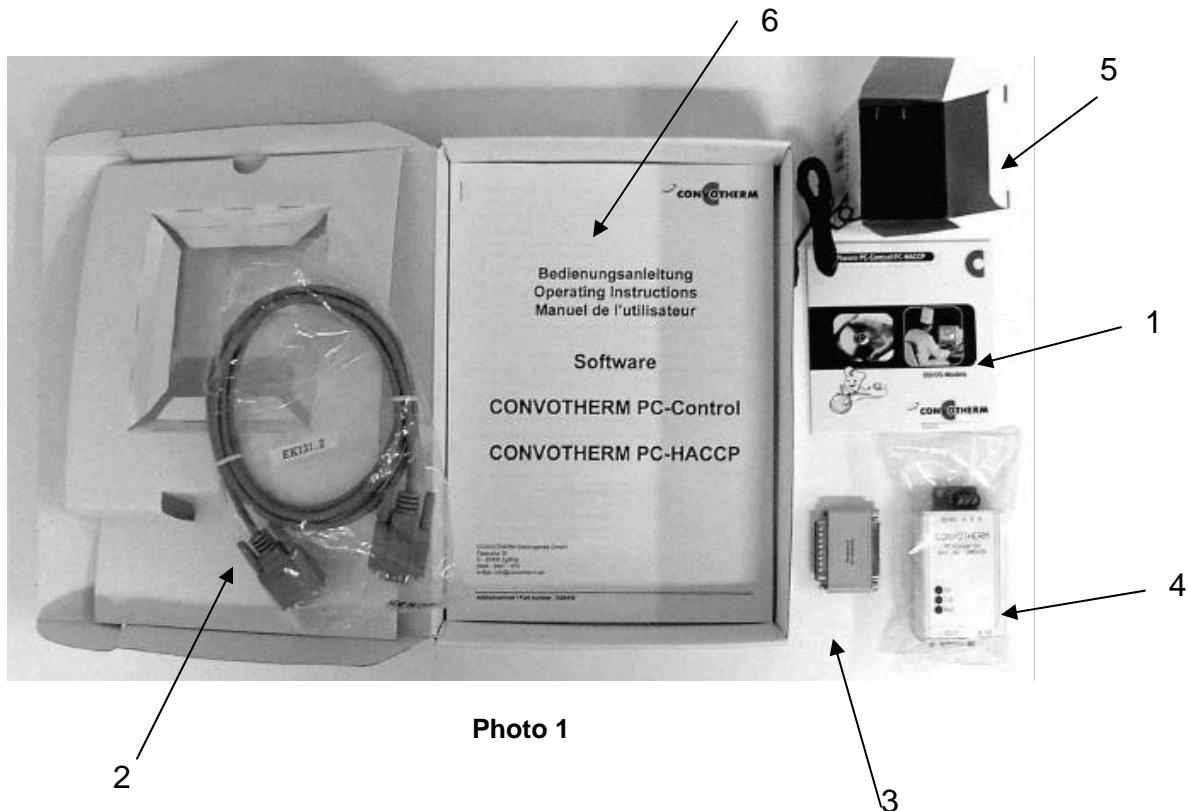


Photo 1

- 1 Software-CD - 300550
- 2 Network Connection Cable – 300551 (included only w/ 232 kit)
- 3 Dongle - C5009210
- 4 PC Interface Converter - C5009156 (included only w/ 232 kit)
- 5 9 Volt Power Supply for Converter – 300548 (included only w/ 232 kit)
- 6 Operating Instructions – 260AZV

USB TO RS 232/485 ADAPTER 300555 included only with kit number CPC-HACCP-MUUSB

USB Cable

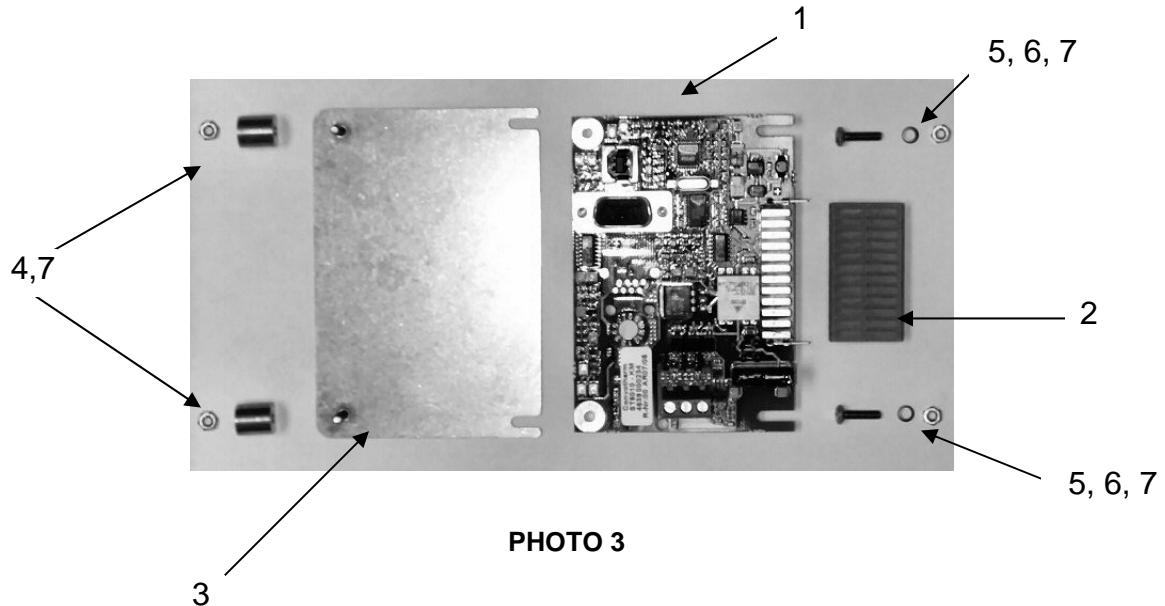


USB Adapter

Software-CD
See Page 20 for
Installation Instructions

Photo 2

RS485 Communication Module p/n C-RS485



- 1 Electronic Board (1) – C5019104
- 2 Connector (1) – C5002091
- 3 Bracket with Studs (1) – C2114799
- 4 Control Panel Spacers (2) – C8009030
- 5 Screws – M3 (2) - 111633
- 6 Lock Washers (2) – C8016001
- 7 Hexagon Nuts – M3 (4) – C8004012

TO CONNECT THE RS232 CONVERTER TO THE PC

Photos 4, 5, and 6 show the correct cable connections from the PC to the PC Converter for RS232. Note the position of the Dongle on the PC in Photo 5. Make sure the PC Converter is connected to the 9-volt DC power supply as shown in Photo 7.



Photo 4



Photo 5



Photo 6

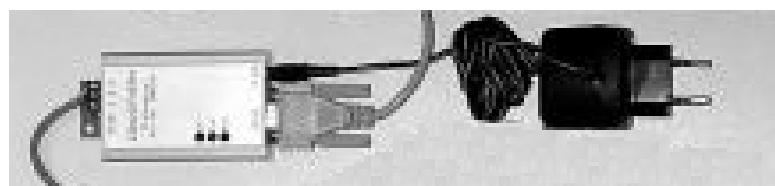


Photo 7

RS232 CABLE CONNECTION FOR CONVERTER TO RS485 ONLY

Photo 8 shows the cable connections for the PC Converter.

The PC Converter wiring is connected to the FIRST Combi in the Chain.



Photo 8

NOTE:

- A: RED WIRE**
- B: BLACK WIRE**
- GROUND: GROUND OR SHIELD WIRE**

TO CONNECT USB CONVERTER TO RS485 ONLY

IMPORTANT:

ALWAYS USE THE SAME USB PORT WHEN REATTACHING THE USB CABLE TO THE PC!

See Page 20 for instructions for USB hardware and software installation and setup.

The USB software must be installed on the PC before using the USB adapter.

Photos 9, 10, and 11 shows the correct USB cable connections from the PC to the Converter in Photo 12.

Note the position of the Dongle on the PC in Photo 11.



Photo 9



Photo 10



Photo 11

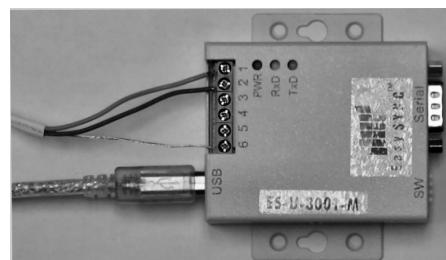


PHOTO 12 SHOWS WIRE CONNECTIONS PIN 1, PIN 2, AND GROUND (PIN 6).

Photo 12

Remove the Control Side Cover



Photo 13

Turn the 1/4 turn quick-locks to loosen.



Photo 14



Photo 15

From the bottom edge of the side panel, push up and pull out.
Remove the side panel and set it aside.



Photo 16

Remove the Control Panel



Photo 17

Press down and turn counterclockwise to remove the Operation Panel retention screw.



Photo 18

Remove the Operation Panel out from the rear. Be careful not to drop it.
Disconnect the computer cable from the Operation Panel and set the panel aside.



Photo 19

Remove the Control Panel and place it on a work surface as shown.

Attaching the Base Plate to the Communication Module

1. Mount the board to the panel using the spacers, nuts and washers included in the kit.

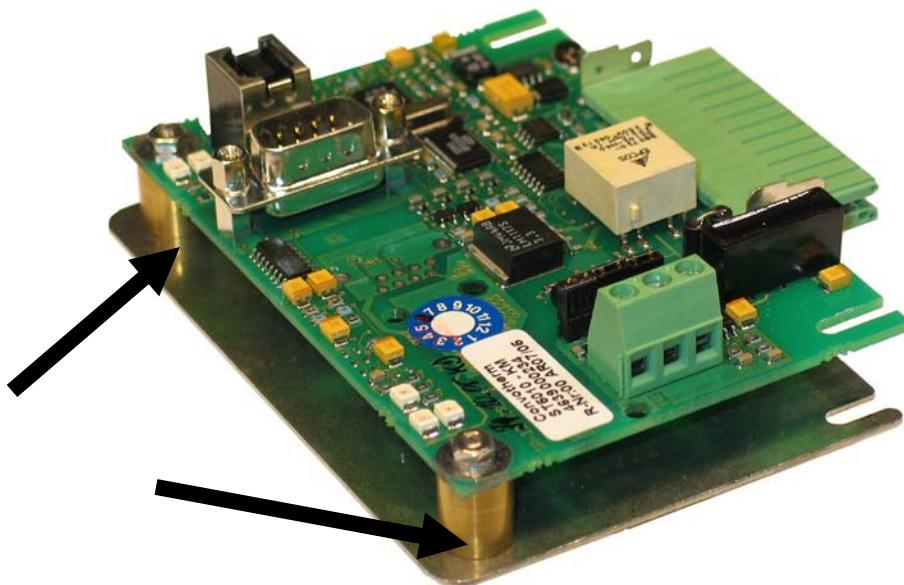


Photo 20

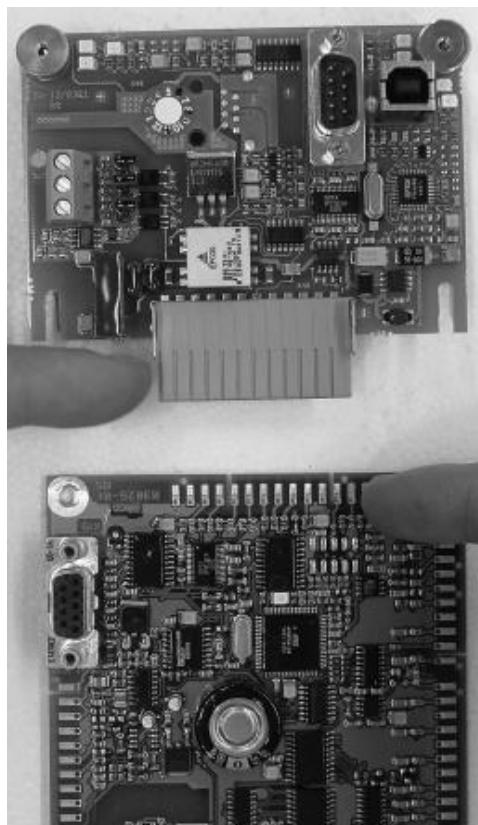


Photo 21

Press the Communication Module Interface onto the Control Module.
Tighten the screws holding the Communication Module to the Control Module.

Attaching the Base Plate to the Communication Module

Mount the board to the panel using the spacers and nuts included in the kit.

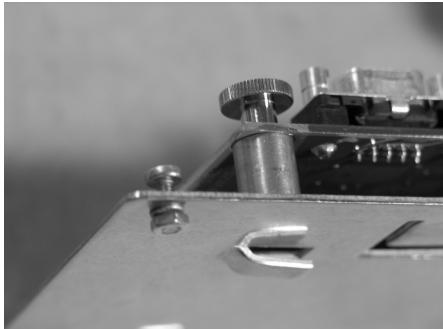


Photo 22

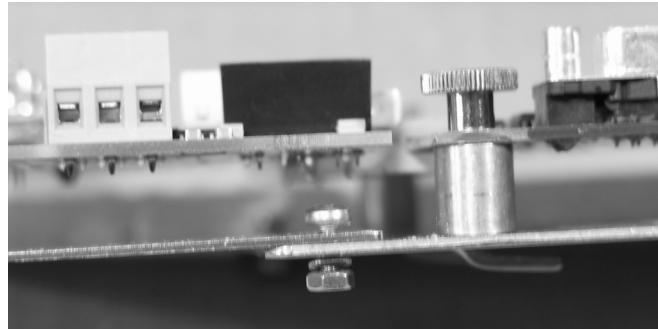


Photo 23



Photo 24
Complete Assembly of Communication Module Interface and Control Module.

Inserting the Communication Module Cable into the Oven



Photo 30

Remove the sanitary seal plug from the underside of the Combi.



Photo 31

Insert the new bushing, P/N 111751 into the opening.

Pull the Communication Module cable through the Bushing.
Pull enough wire through the bottom of the oven to allow ample movement while
attaching the wires to the network boards.

Connect the Network Cable to the Communication Module

Take care to match the wire ends or colors to the connections throughout the network to avoid miswiring.

For RS232 Converter: Attach the wire to the Converter at connection "A" and attach the other end to connection "A" on the Communication Module. Attach the wire to the Converter at connection "B" and attach the other end to connection "B" on the Communication Module. Connect drain/shield as ground

For USB: Attach the network wire to connection 2 on the Converter and attach the other end to connection "A" on the Communication Module. Attach the network wire to connection 1 on the Converter and attach the other end to connection "B" on the Communication Module. Connect drain/shield as ground

The network module in the first oven and all others in the network but the last all has identical wiring

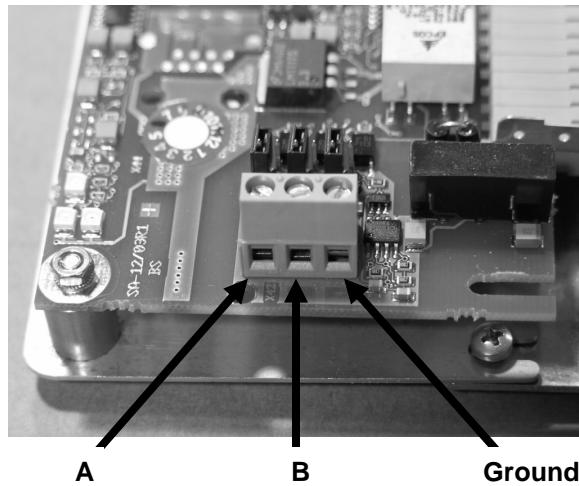


Photo 25

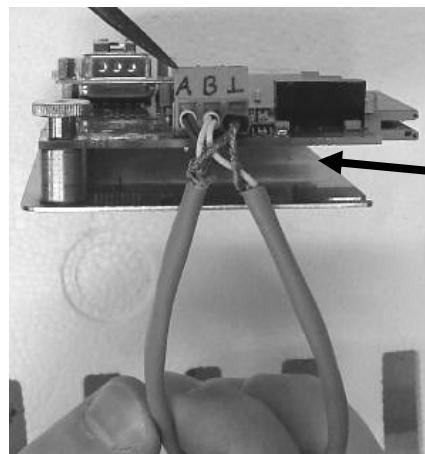


Photo 26

Setting the Jumpers on the Communication Module

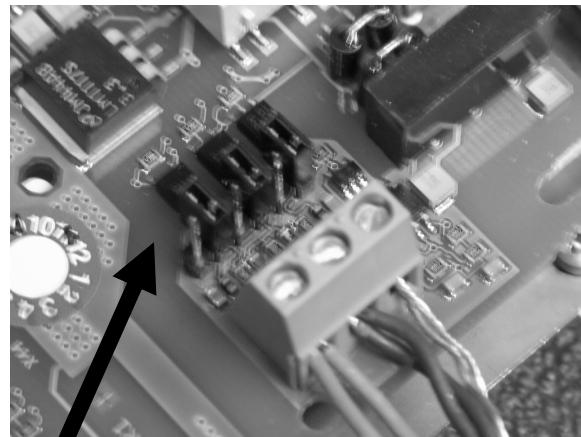


Photo 27

Jumper setting for the first Combi and all Combis in the Network.
To set the jumpers: gently pull them from the board and install them as shown.

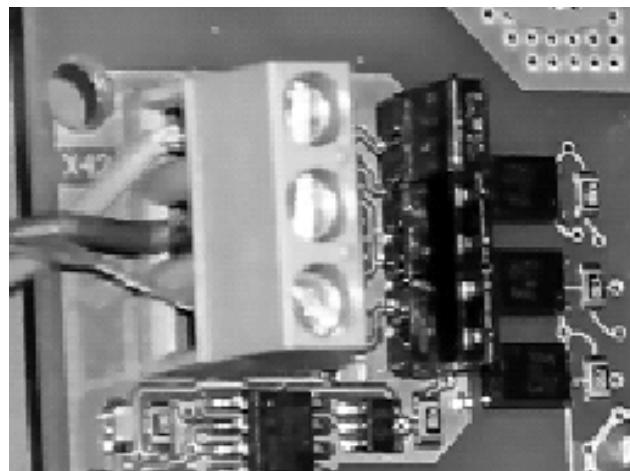


Photo 28

Wire Connection and jumpers positions for last communication module in the Network.

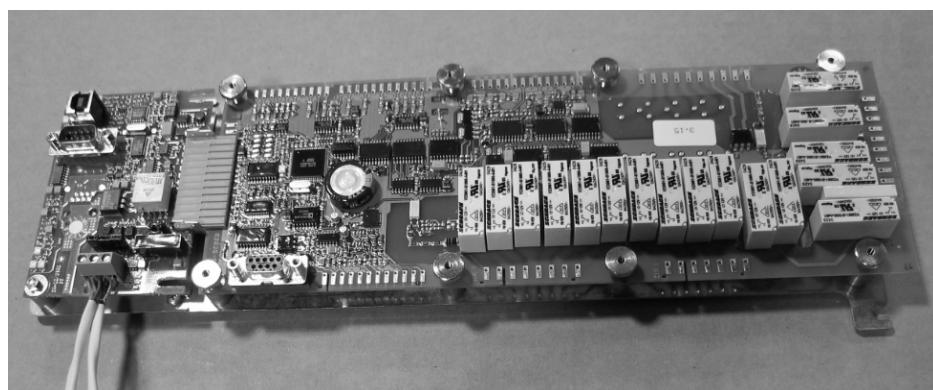


Photo 29

Wires Connected to Communication Module Interface and Control Module Assembly.

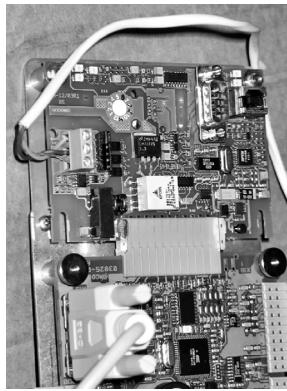


Photo 33

Secure cable to the upper right spacer as shown in Photo 36.



Photo 35

Place Control Board and Module back into the Combi.

Use wire ties to secure cable away from high voltage, sharp corners and edges, and moving parts.

Make sure the Control Board can still be removed from the Combi once the Network Board and cables are attached.

Replace the Operation Panel



Photo 36

Remount the Operation Panel back into the Combi.



Photo 37

Press down and turn clockwise to tighten the Operation Panel retention screw.

Replace the Control Side Panel



Photo 38

Push up and in from the bottom edge of the side panel.



Photo 39



Photo 40

Turn the 1/4 turn quick-locks to tighten.



Photo 41

See the PC-HACCP Instructions to use the PC-HACCP Network.

Directions for Installing the USB Adapter

1. Plug the USB connector into the adapter and connect to one of the USB ports on the back of your computer.
2. Install the USB drivers onto your computer using the CD provided in the kit.
3. Follow the instructions that are on the CD to configure the COM ports so the computer can recognize the USB adapter.(See configuration pages for data speeds and other settings)
4. Configure the USB for COM 2-4 only. The PC-HACCP will only recognize those COM ports.
5. Record which COM port the USB is connected to and always plug the adapter into that port when using the PC-HACCP controls.



Select “No not at this time.”

Found New Hardware Wizard



Welcome to the Found New Hardware Wizard

Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).

[Read our privacy policy](#)

Can Windows connect to Windows Update to search for software?

- Yes, this time only
- Yes, now and every time I connect a device
- No, not this time

Click Next to continue.

< Back

Next >

Cancel

Select install from a list of specific location (advanced)

Found New Hardware Wizard



This wizard helps you install software for:

USB <-> Serial



If your hardware came with an installation CD or floppy disk, insert it now.

What do you want the wizard to do?

- Install the software automatically (Recommended)
- Install from a list or specific location (Advanced)

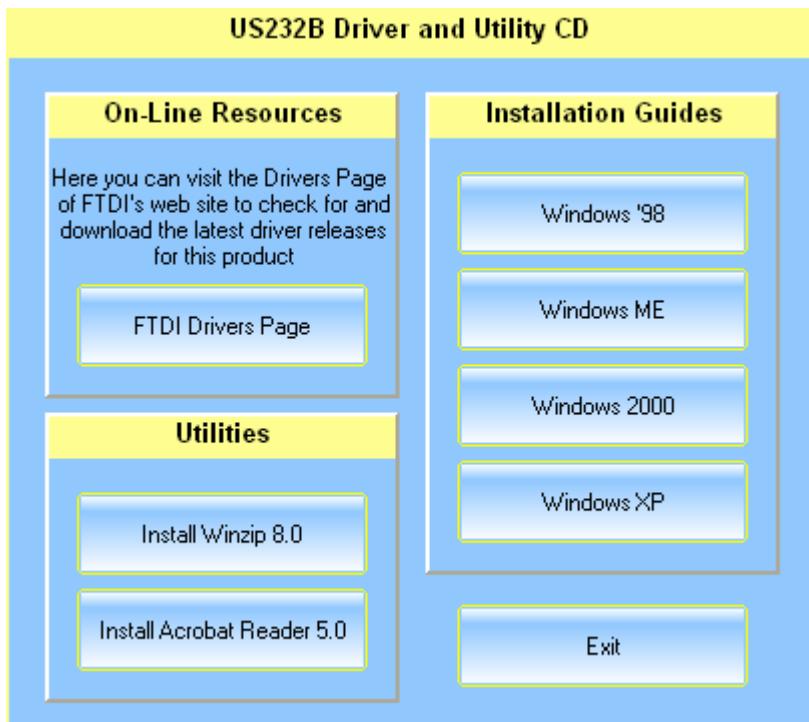
Click Next to continue.

< Back

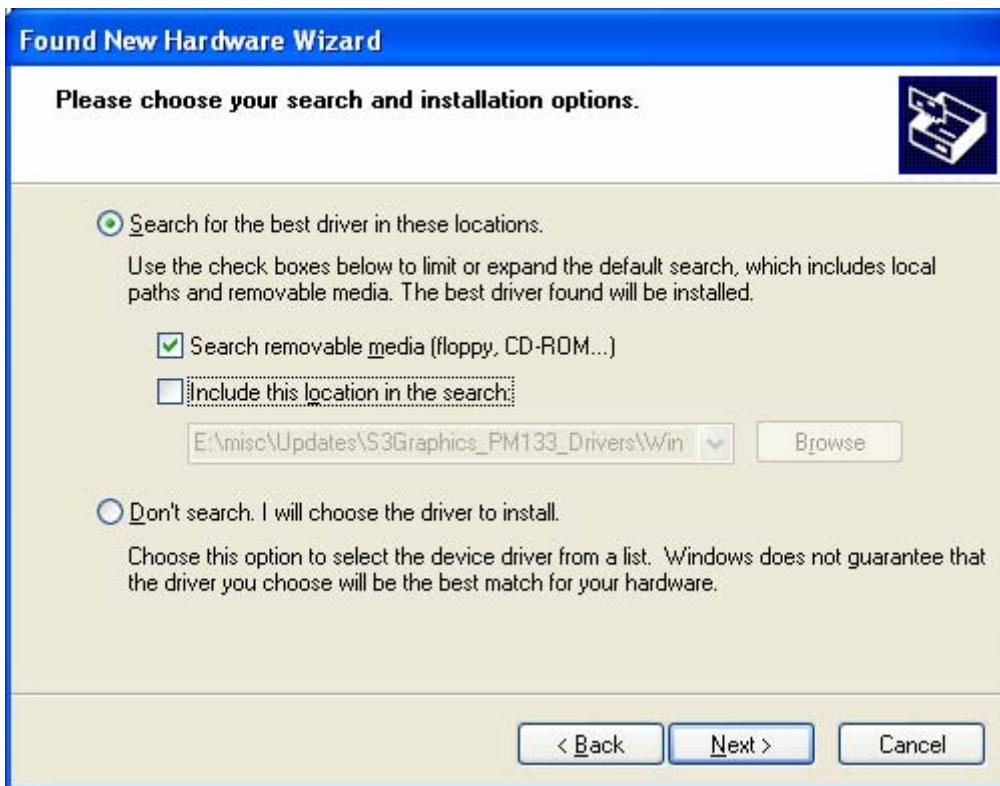
Next >

Cancel

Ignore this screen if it appears:



Uncheck “Include this location in the search.”



Click Next. Let search



The Hardware wizard will appear a second time:



Follow the directions in each screen.



Found New Hardware Wizard



This wizard helps you install software for:

USB Serial Port



If your hardware came with an installation CD or floppy disk, insert it now.

What do you want the wizard to do?

- Install the software automatically (Recommended)
- Install from a list or specific location (Advanced)

Click Next to continue.

< Back

Next >

Cancel

Allow search for CD

Found New Hardware Wizard

Please wait while the wizard searches...



USB Serial Port



< Back

Next >

Cancel



Click Finish to close the screen.

Configure your serial device:

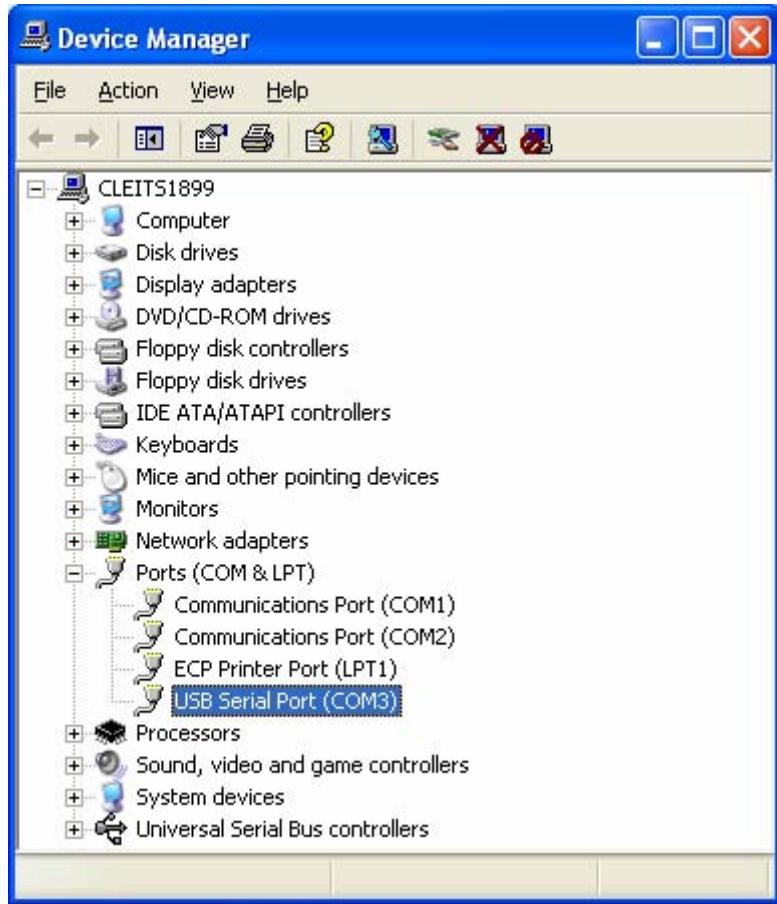
1. Right click My Computer, select properties:



Then select the "Hardware tab" and click on the "Device Manager" button.



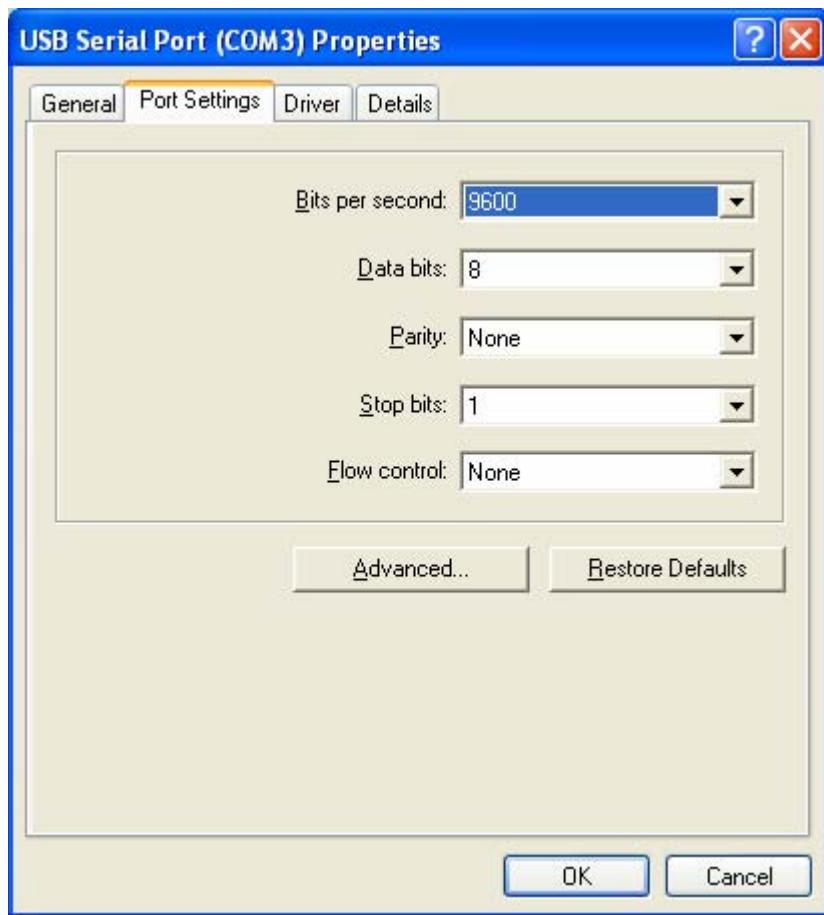
Expand the Ports (COM & LPT) device



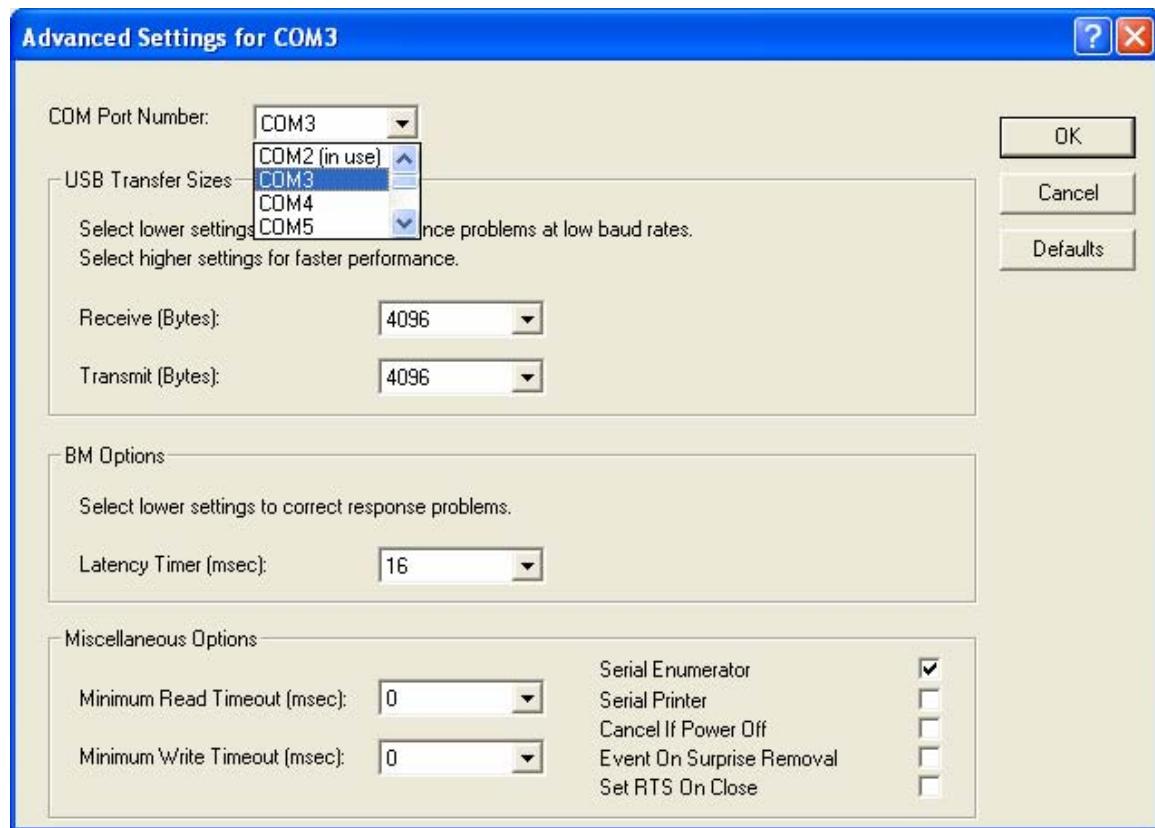
Right click on the “USB Serial Port (COM??)” item.

The ?? will be a number greater than 0 and less than 255.

Select the Port Settings tab.

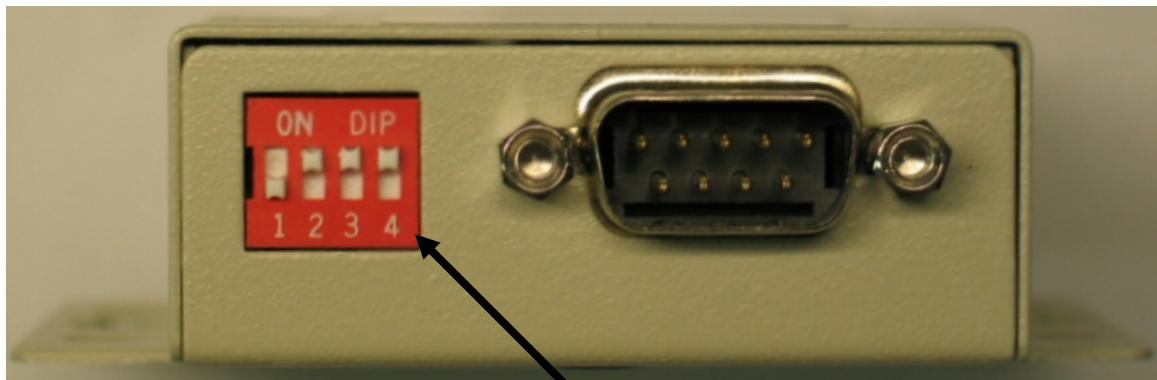


Note the COM setting. Only COM1, COM2, COM3, and COM4 can be used by the HACCP software. To change the COM number, click the Advanced button.

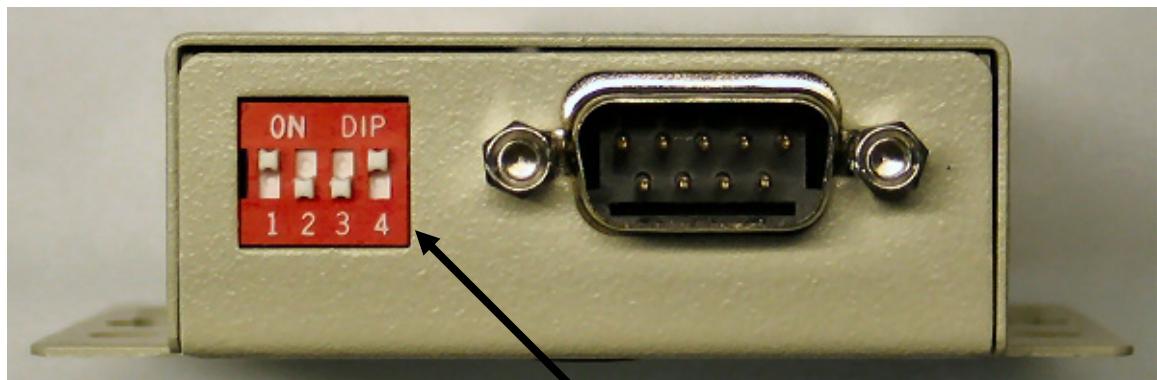


If needed click the COM Port Number: drop menu and select and acceptable port number. If all are marked as (in use) then change one of the other serial devices to a COM port number higher than 4. Click OK.

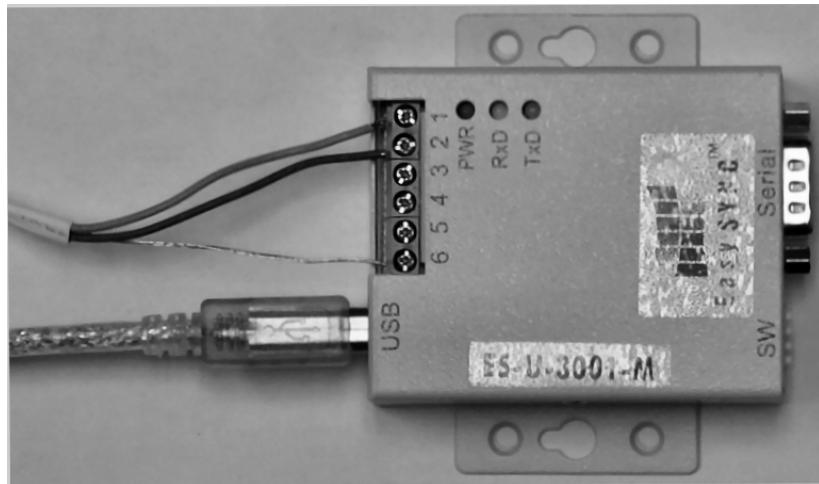
- Once the computer recognizes the USB adapter, the dip switches in the adapter have to be set up for RS485 or RS232 data transfer; chose the correct setting to match the configuration you are using.



**For USB to RS232
Switches 2, 3, 4 are ON**

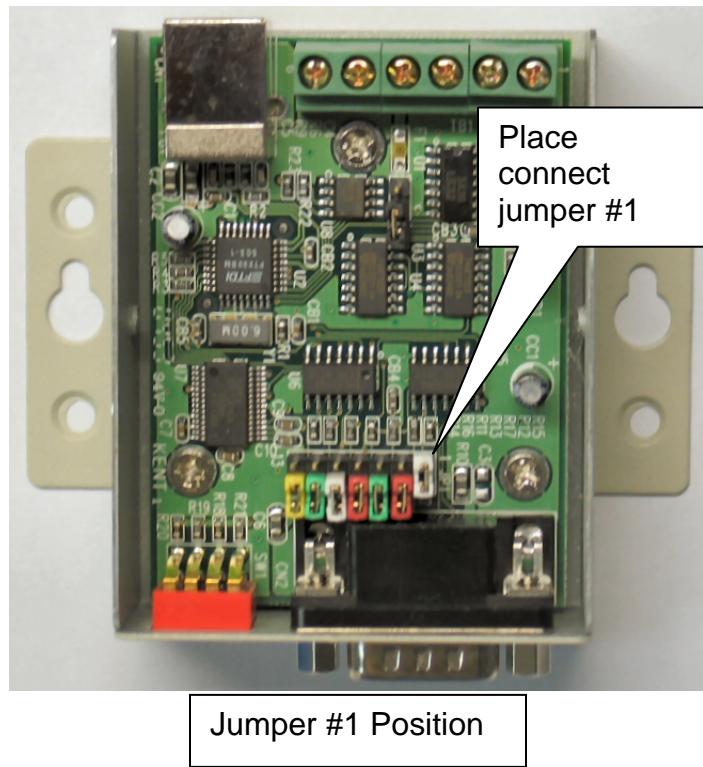


**For USB to RS485
Switches 1 and 4 are ON**



SHOWS WIRE CONNECTIONS PIN 1, PIN 2, AND GROUND (PIN 6).

7. For the adapter to output data for RS485, a jumper inside the metal case must be positioned correctly. This photo shows the position of the #1 jumper. All other jumpers should be in the original position.



8. Place the metal cover back on the adapter and secure the screws.
9. The adapter is now ready for use with the PC-HACCP.

This Page for Internal Record Only, Not for Printing

Cleveland Range, LLC

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Drawing No. 260AZH

Revision Index Page

REV	REVISION HISTORY	DATE	BY
A	260AZH Production Release Per EO # C-6947	12-12-05	ERB
B	Added new part number for HACCP instruction PER EO # C-7022	04-16-06	ERB